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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,320	07/23/2003	David A. Brown	2037.2005-008	7755

21005 7590 06/16/2005

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EXAMINER

MOFIZ, APU M

ART UNIT	PAPER NUMBER
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2165

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/625,320	<b>Applicant(s)</b> BROWN, DAVID A.	
	<b>Examiner</b> Apu M. Mofiz	<b>Art Unit</b> 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Applicant's arguments filed May 02, 2005 with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-5, 8-14 and 17-18 are rejected under 35 U.S.C. 102(a) as being anticipated by Suba Varadarajan (Virtual Local Area Networks, August 14, 1997, pages 1-14 and Varadarajan hereinafter).

As to claims 1 and 10, Varadarajan teaches a switch (page 1) for receiving and forwarding data packets comprising: at least one ingress port for receiving data packets, at least one of the data packets associated with a virtual LAN identifier (page 6); at least one egress port for forwarding the data packets (page 6); and forwarding logic which provides a translated identifier for the virtual LAN identifier (page 9; page 10), the forwarding logic comprising: a filtering database that provides a forward vector for the translated identifier from a single search of the filtering database (page 9; page 10).

As to claims 2 and 11, Varadarajan teaches wherein the forwarding logic assigns a default value to the virtual LAN identifier (i.e., for all of the VLAN-unaware bridges/switches, the frames are tagged with a default value or untagged. VLMP (i.e., Virtual LAN Management Protocol; for further clarification See VLMP RFC) also requires that.) (page 8; page 9).

As to claims 3 and 12, Varadarajan teaches that the translated identifier includes a group identifier and a group member identifier for the virtual LAN (page 10).

As to claims 4 and 13, Varadarajan teaches the filtering database includes a first entry and a second entry (i.e., the filtering database includes a plurality of entries) (pages 9-11).

As to claims 5 and 14, Varadarajan teaches that the filtering database provides the forward vector associated with the first entry when the translated identifier matches the first entry and provides the forward vector associated with the second entry when only the group identifier portion of the translated identifier matches the second entry (i.e., for each entry, there is a list of entries that the packet can be forwarded to as specified in the filtering database) (pages 9-14).

As to claims 8 and 17, Varadarajan teaches that the virtual LAN identifier is stored, in a header included in the received data packet (pages 9-14).

As to claims 9 and 18, Varadarajan teaches that the forwarding logic further comprises: a forward vector table which stores the forward vector associated with the received data packet, the filtering database providing a pointer to the location of the forward vector in the forward vector table (i.e., the Virtual LAN Management Protocol requires the switch to store a pointer to a list of the Virtual LANs that the source address is in. See VLMP RFC. Explaining RFC is beyond the scope of this Office Action.) (pages 9-14).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims rejected under 35 U.S.C. 103(a) as being unpatentable over Suba Varadarajan (Virtual Local Area Networks, August 14, 1997, pages 1-14 and Varadarajan hereinafter) in view of Devashish Paul (Ternary DRAM CAM: Now and the Future, pages 1-2 and Paul hereinafter).

As to claims 6-7 and 16-17, Varadarajan teaches a filtering database in a switch (pages 9-14).

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Varadarajan does not explicitly teach that the switch uses Ternary Content Addressable Memory.

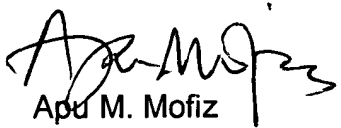
It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Varadarajan with the teachings of Paul to include that the switch uses Ternary Content Addressable Memory with the motivation to use table-lookups at wire speed, conducting as many as 6 million searches per second (Paul, page 1).

***Points of Contact***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Apu M. Mofiz whose telephone number is (571) 272-4080. The examiner can normally be reached on Monday – Thursday 8:00 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Faffin can be reached at (571) 272-4146. The fax numbers for the group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

  
Apu M. Mofiz  
Patent Examiner  
Technology Center 2100

June 13, 2005